U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Valley Pike VOC Site - Removal Polrep
Initial Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: **POLREP #1**
Initial
Valley Pike VOC Site

Riverside, OH
Latitude: 39.7975660 Longitude: -84.1320980

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From: Steven Renninger, On-Scene Coordinator
Date: 1/21/2014
Reporting Period: December 9, 2013 through January 17, 2014

1. Introduction

1.1 Background

Site Number:	C5U2	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	10/29/2013
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	12/9/2013	**Start Date:**	12/9/2013

Demob Date:	**Completion Date:**
CERCLIS ID:	**RCRIS ID:**
ERNS No.:	**State Notification:**
FPN#:	**Reimbursable Account #:**

1.1.1 Incident Category

Time-Critical Removal Action

1.1.2 Site Description

Ohio EPA Site Inspection - November 2010

In November 2010, Ohio EPA conducted a Site Inspection at Mullins Rubber Products (MRP) facility on Valley Pike in Riverside, Ohio, and noted the flow of groundwater is to the south and southwest of the MRP facility. Six groundwater grab samples were collected using the Geoprobe® direct-push technology. The active deep production well was sampled, along with dry well number DW-2, which received cooling water from the MRP degreasing tanks. Ohio EPA documented PCE and TCE contamination in the active production well and dry wells at the MRP facility in the November 2010 sampling.

Ohio EPA Expanded Site Inspection - December 2011

In December 2011, Ohio EPA conducted an Expanded Site Inspection (ESI) at MRP. Three Geoprobe pre-packed monitoring wells were installed. ESI samples documented PCE and TCE in both shallow and deep aquifers but contamination was highest in MW-3 located at the southwest corner of the MRP facility. PCE was detected at a concentration of 300 µg/L in MW-3. Higher concentrations of PCE in the shallow aquifer pointed to a shallow rather than a deep source of PCE.

Ohio EPA Supplemental Expanded Site Inspection - March 2013

In March 2013, Ohio EPA conducted a Supplemental Expanded Site Inspection (SESI) at the Site. SESI sampling results showed significant detections of TCE and PCE in the shallow sand and gravel aquifer. The highest concentration of PCE in shallow groundwater was detected at MW-14 (soil boring SB-14 location), approximately 50 feet (ft) down-gradient of the MRP facility. The concentration of PCE was 14,000 µg/L in the laboratory-analyzed sample. In addition, Ohio EPA observed PCE concentrations ranging from 5 to 14,000 µg/L along the southwestern perimeter of the MRP facility and non-detect to 31 µg/L along the northeastern perimeter (upgradient) of the MRP facility. Based on these groundwater sample results, the Ohio EPA SESI report concluded that the PCE source is east of sample location MW-14.

Additionally, PCE was detected at a concentration of 1,500 µg/L at MW-4 in a residential area (corner of Bushnell and Hypathia Avenues) located 900 ft southwest of the MRP facility. The detection of VOCs in the groundwater underlying this residential area, which is down-gradient of the MRP facility, prompted Ohio EPA to request EPA removal assistance in May 2013 to investigate potential vapor intrusion at the Site.

In a letter dated May 9, 2013, the Ohio EPA expressed concerns about the risk to human health from indoor air exposure to VOCs from a shallow PCE and TCE groundwater plume. Ohio EPA viewed the Site as a potential threat to the residences and businesses located southwest of the MRP facility. Ohio EPA requested assistance from the EPA Removal Branch in evaluating options for addressing current and potential vapor intrusion risks at the Valley Pike VOC Site (aka Mullins Rubber Products Site).

On June 14, 2013, the Health Assessment Section of the ODH provided health-based guidance to evaluate the results of vapor intrusion sub-slab and indoor air sampling for contaminants of concern at the Site.

Sub-Slab Screening Levels (residential properties):
PCE = 60 ppbv
TCE = 4 ppbv

Indoor Air Screening Levels (residential properties):

PCE = 6 ppbv
TCE = 0.4 ppbv

1.1.2.1 Location

The Valley Pike VOC Site is located in the residential area west and southwest of the MRP facility, located at 2949 Valley Pike, in Riverside, Montgomery County, Ohio. The Site's geographic coordinates are 39° 47' 51.2376" North latitude and 84° 7' 55.5522" West longitude. The Site includes a PCE and TCE-contaminated groundwater plume flowing south and southwest of the MRP facility into the adjacent residential area.

MRP is located approximately 1,300 feet north of the Dayton Mad River Well Field wellhead protection area (WHPA) area five-year time of travel delineation and 1,500 feet southeast of the Dayton Miami Well Field WHPA area five-year time of travel delineation. The closest production well is PW-06, approximately 2,650 feet south of the facility in the Mad River Well Field.

1.1.2.2 Description of Threat

The residential neighborhood located west and southwest of the MRP facility is potentially being affected by PCE and/or TCE vapor intrusion.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

In July and August 2013, EPA conducted a removal site assessment at the Site. The purpose of the site assessment was to determine if vapor intrusion was occurring in the residential neighborhood west and southwest of the MRP facility and to evaluate the Site for a potential time-critical removal action. During the site assessment, EPA conducted the following activities:

- Reviewed historical Ohio EPA groundwater and soil gas sampling results.
- Oversaw the Ohio EPA Site Investigation Field Unit use a Geoprobe unit to collect eight grab groundwater samples and install 16 nested soil gas probes at 9 locations.
- Analyzed four groundwater samples collected by Ohio EPA personnel
- Collected nine soil gas samples from the Ohio EPA installed soil gas probes
- Collected five sub-slab samples from residential properties and one sub-slab sample from a nonresidential property.
- Collected seven indoor air samples from residential properties and one indoor air sample from a nonresidential property.

Based on 2013 EPA data, the ODH concluded that a completed exposure pathway exists for vapor intrusion at the Site. PCE was documented in groundwater samples (PCE as high as 20,000 µg/L), soil gas samples (PCE as high as 30,000 ppbv), sub-slab samples (PCE as high as 8,200 ppbv), and indoor air samples (PCE as high as 32 ppbv). In addition, a second exposure pathway exists for vapor intrusion, as TCE was documented in the groundwater (TCE as high as 47 µg/L), in the soil gas (TCE as high as 5,600 ppbv), in the sub-slab (TCE as high as 160 ppbv), and in the indoor air (TCE as high as 0.92 ppbv) at the Site. Vapor intrusion is occurring at the Valley Pike VOC Site.

Based on the analytical results and Site conditions observed during the site assessment, the Site meets the criteria for a removal action pursuant to 40 CFR 300.415(b)(2) and poses an imminent and substantial threat to the public health or welfare of the United States or the environment.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

EPA sampling results from 2013 have documented that vapor intrusion is occurring in the Riverside residential neighborhood located west and southwest of the MRP facility.

The sub-slab samples from four residential properties have PCE concentrations ranging from 930 to 8,200 ppbv, which exceeds the ODH residential sub-slab screening level of 60 ppbv. The indoor air samples from two residential properties have PCE concentrations ranging from 6.9 to 32 ppbv, which exceeds the ODH residential indoor air screening level of 6 ppbv. These results document a completed exposure pathway for PCE vapor intrusion.

The sub-slab samples from three residential properties have TCE concentrations ranging from 60 to 160 ppbv, which exceeds the ODH residential sub-slab screening level of 4 ppbv. The indoor air samples from three residential properties have TCE concentrations ranging from 0.44 to 0.92 ppbv, which exceeds the ODH residential indoor air screening level of 0.4 ppbv. These results document a completed exposure pathway for TCE vapor intrusion.

ODH Health Consultation - September 2013

On September 4, 2013, ODH, under a Cooperative Agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), submitted a Letter Health Consultation to EPA. The Health Consultation assesses the data that EPA collected and discusses the public health implications of exposure to VOCs from vapor intrusion from the Site. The Health Consultation provides the following conclusions and recommendations:

Health Consultation Conclusions

1. A completed exposure pathway exists for vapor intrusion, as PCE has been detected as high as 20,000 ppb in the groundwater, 30,000 ppb in the soil gas, 8,200 ppb in the sub-slab soil gas, and 31 ppb in the indoor air at one residence. TCE has been detected as high as 47 ppb in the groundwater, 5,600 ppb in the soil gas, 160 ppb in the sub-slab soil gas, and 0.87 ppb in the indoor air at the same residential property.

2. VOCs in the sub-slab soil gas samples at the four residences sampled (two located on Rondowa Avenue, one on Hypathia Avenue, and one on Bushnell Avenue) located in the neighborhood southwest of the MRP facility were detected at levels that could affect indoor air quality. PCE levels in the sub-slab samples exceeded both screening and action levels.

3. Concentrations of PCE and TCE in the indoor air of one residence tested in July 2013 exceeded screening levels. The estimated total non-cancer hazard quotient is about 7. There is a potential but low cancer risk of 8×10^{-5} (8 in 100,000) for residents exposed over a lifetime.

4. More data is needed to conclude whether the vapor intrusion pathway could affect indoor air quality at other residential properties and harm people's health. At this time, only a few indoor air samples have been collected by EPA. Additionally, previous experience with vapor intrusion sites in the same general part of north Dayton have indicated potential for significant seasonal variation in soil gas levels under impacted homes.

Health Consultation Recommendations

1. Testing the indoor air of the other homes with high sub-slab results should be a priority. Other residences and businesses at risk of exposure via vapor intrusion pathway should have their sub-slab and indoor air sampled for PCE, TCE, and degradation products cis-1,2-DCE and vinyl chloride. Concurrent outdoor (ambient) air samples should also be collected. Sample collection during multiple seasons, including at least one sample in the winter, is recommended to characterize seasonal variability.

2. The home on Bushnell Avenue should be considered for mitigation to reduce or eliminate ongoing exposures to PCE and TCE in the indoor air. Occupied residences with sub-slab soil gas concentrations exceeding action levels should also be considered for mitigation.

3. The full extent of the VOC contamination, both in groundwater and soil gas, associated with the Valley Pike VOC site should be determined.

2.1.2 Response Actions to Date

On December 9, 2013, EPA opened a project office at 2049 Harshman Road, Riverside, Ohio. The EPA project office will be used to coordinate access agreements, sampling, resident meetings, and mitigation. On December 10, 2013, EPA conducted a public meeting at Stebbins High School. The public meeting was attended by approximately 200 residents. Local and state government officials were also in attendance. EPA explained the sampling results from the summer of 2013 and highlighted the following:

- There is a PCE and TCE groundwater plume beneath the residential neighborhood west and southwest of the MRP facility;
- Elevated concentrations of PCE and TCE were observed in the groundwater, soil gas, sub-slab and indoor air in the neighborhood;
- EPA requested residential properties interested in having their properties assessed and sampled for vapor intrusion to sign an access agreement
- If properties show vapor intrusion sampling results greater than the screening levels established by ODH, EPA will offer to install a vapor abatement system (similar to a radon system); and
- EPA established a local project office in the neighborhood, located at 2049 Harshman Road

Following the public meeting, EPA and EPA START scheduled approximately 34 properties to be sampled for vapor intrusion.

Week of December 16, 2013
EPA collected 8 vapor intrusion samples. The samples collected were either sub-slab samples or crawl space samples.

The sub-slab and crawl space air samples are being collected using pre-cleaned, laboratory-supplied, 6-liter SUMMA canisters. The SUMMA canisters are being fitted with flow regulators to allow sample collection over a 24-hour period. The SUMMA canisters for the sub-slab samples were connected to the stainless-steel sub-slab probes with Teflon® tubing. The samples are being analyzed for VOCs using EPA Method TO-15.

For sub-slab sampling, the sub-slab probes are being installed and the samples are being collected in accordance with the "*Standard Operating Procedures for the Construction and Installation of Permanent Sub-Slab Soil Gas Wells, #2082,*" (SOP No. 2082) dated March 29, 2007, under the EPA Response Engineering and Analytical Contract.

The crawl space samples are being collected by either placing the SUMMA canister within the crawl space and turning on the SUMMA canister, or by attaching the Teflon tubing to a PVC pipe and extending the pipe as far underneath the property as possible.

Week of December 23, 2013
No work was conducted on site.

Week of December 30, 2013
EPA collected 3 vapor intrusion samples. The samples collected were either sub-slab samples or crawl space samples.

Analytical results were received from the 8 samples collected before Christmas. Of the 8 samples collected, 5 samples showed either sub-slab or crawl space PCE concentrations exceeding ODH PCE screening levels. The 5 properties are eligible to receive an EPA-installed sub-slab depressurization system (SSDS).

Week of January 6, 2014
EPA collected 13 vapor intrusion samples. The samples collected were either sub-slab samples or crawl space samples.

EPA and ERRS conducted meetings with the original 4 property owners which have sub-slab PCE concentrations greater than the ODH PCE sub-slab screening level. ERRS scheduled a walkthrough of each property with its SSDS contractor, the Environmental Doctor. The walkthrough will allow the Environmental Doctor to determine the layout and the cost estimate of the SSDS.

Week of January 13, 2014
No work was conducted on site.

As of January 21, 2014, the following are the up-to date vapor intrusion Site sampling numbers:
- 12 properties are eligible to receive a SSDS
- 0 properties currently have an installed SSDS (1st install is on 1/23/14)
- 67 properties are scheduled to be sampled
- 15 properties have results less than ODH screening levels

- 23 properties have signed an access agreement and are awaiting sample scheduling
- 4 properties have been sampled and have data pending from the laboratory
- 2 properties have denied EPA access to conduct vapor intrusion sampling

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

EPA is investigating PRPs at the Site.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
N/A					

2.2 Planning Section

2.2.1 Anticipated Activities

See below in Section 2.2.1.1.

2.2.1.1 Planned Response Activities

1. Develop and implement a Site Health and Safety Plan;

2. Conduct vapor intrusion sampling (for VOCs) and extent of contamination sampling utilizing groundwater, soil gas, sub-slab, and indoor air sampling techniques. The area of investigation includes the MRP facility on the east, Pleasant Valley Avenue on the west (approximately 1,500 feet southwest of the MRP facility), Bushnell and Hypathia Avenues on the north and Valley Pike Road on the south. This area covers approximately 4 residential blocks and 75 residences.

3. If the ODH Sub-Slab or Indoor Air Screening Level for a contaminant of concern (e.g., PCE or TCE) is exceeded for a residential structure, design and install a vapor abatement mitigation system in the structure impacted by subsurface gas migration (up to 75 residences). The abatement system will include installation of a SSDS or crawl space depressurization system, sealing cracks in walls and floors of the basement, and sealing drains that could be a pathway. The vapor abatement mitigation system will be designed to control levels of VOCs to below ODH sub-slab and indoor air screening levels; and

4. Develop and implement a performance sample plan to confirm that ODH screening levels are achieved for contaminants of concern (PCE, TCE, etc) following installation of a SSDS.

2.2.1.2 Next Steps

1. Continue reaching out to residents in the neighborhood to obtain access agreements to conduct vapor intrusion sampling. Efforts to include door-to-door and a future mailer.

2. Continue vapor intrusion sampling in the residential neighborhood (Phase1 area).

The following samples have been scheduled:
Week of January 20, 2014 -- 9 samples
Week of January 27, 2014 -- 13 samples
Week of February 3, 2014 -- 13 samples
Week of February 10, 2014 -- 13 samples
Week of February 17, 2014 -- 10 samples
Week of February 24, 2014 -- 10 samples

3. Generate sample result letters and schedule meetings with residents to discuss sampling results.

4. Schedule SSDS design walk-through times and installation dates, as necessary.
5. Initiate SSDS installation on January 23, 2014
6. Conduct performance sampling, as necessary, 30 days and 180 days following SSDS installation.
7. Generate O&M Manuals for properties that have an SSDS installed.

2.2.2 Issues

To schedule vapor intrusion sampling, please visit or the call EPA project office located at:

EPA Project Office
2049 Harshman Road
Riverside, OH 45424
937.237.7530

2.3 Logistics Section

None.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$150,000.00	$24,446.00	$125,554.00	83.70%
START	$50,000.00	$26,304.00	$23,696.00	47.39%
Intramural Costs				
USEPA - Direct	$50,000.00	$7,000.00	$43,000.00	86.00%
Total Site Costs	$250,000.00	$57,750.00	$192,250.00	76.90%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer

A safety plan has been completed, reviewed and signed by all personnel on site.

2.5.2 Liaison Officer

Periodic meetings conducted with OEPA, Montgomery Co Health Dept, and ODH to update agencies on sample results.

2.5.3 Information Officer

EPA's Office of Public Affairs (Ginny Narsette - Community Involvement Coordinator) has completed the following:
1. Set up the following website:

http://www.epa.gov/Region5/cleanup/valleypikevocsite/index.html

2. Set up and moderated the public meeting on December 10, 2013
3. Generated a project fact sheet
4. Went door-to-door in the neighborhood to get access agreements signed to allow EPA to conduct vapor intrusion sampling.
5. Set up a repository containing site information. The repository is located at:

Dayton Metro Library
6160 Chambersburg Road
Huber Heights, OH 45424

6. EPA has set up a local project office to schedule sampling and to answer questions.

EPA Local Project Office
2049 Harshman Road (located next to Subway)
Riverside, OH 45424
937.237.7530

3. Participating Entities

3.1 Unified Command

N/A

3.2 Cooperating Agencies

Ohio EPA
PHDMC
Ohio Department of Health

4. Personnel On Site

EPA OSC - 1
START (Weston Solutions/Dynamac) - 1
ERRS - 2

5. Definition of Terms

IA - indoor Air
ODH - Ohio Department of Health
PCE - tetrachloroethylene
ppb - parts per billion
ppbv - parts per billion by volume
SS - sub-slab
TCE - trichloroethylene

6. Additional sources of information

6.1 Internet location of additional information/report

Additional site information can be found at the following EPA public website:

http://www.epa.gov/Region5/cleanup/valleypikevocsite/index.html

6.2 Reporting Schedule

POLREP #2 will be issued in February 2014.

7. Situational Reference Materials

None.